## REMARKS

Reconsideration of the rejections set forth in the Office action mailed December 22, 2004 is respectfully requested. Claims 28-31 are currently pending. Claims 23-27 are cancelled and new claims 30-33 are added with this amendment.

I. Amendments

The description of Fig. 1 in the specification is amended to correct a typographical error. Support for the amendment is found in Figure 1, where the first two of the "boxed areas" referred to in the specification clearly include nucleotides 137-196 (not 137-193).

Claim 23 and its dependent claims 24-26 are cancelled without prejudice, to expedite prosecution. Applicants reserve the right to pursue the subject matter of these claims in continuing applications.

Claim 27 is amended for clarity and to recite that the claimed polynucleotide is effective to inhibit the synthesis of telomeric DNA by telomerase. Support is found in the specification at, for example, page 2, lines 22-23, page 3, lines 12-17, page 11, lines 25-26, and page 24, line 20, and the paragraph bridging pages 26-27. A preferred assay for determining telomerase activity (and the inhibition thereof) is noted at page 11, lines 25-34 of the specification.

Claim 28 has been amended to incorporate the subject matter of parent claim 27.

Claim 29 has been amended to change the transitional language "consisting essentially of" to "consisting of".

Dependent claims 30-33 recite that the "accessible region" of claim 28 is one of a selection of specific regions recited in the specification. Support for the region including nucleotides 137-166 is found, for example, at page 26, line 31 and in Figure 1 of the specification.

No new matter is added by any of the amendments.

II. Allowable Subject Matter

Claim 28 was objected to as being dependent on a rejected base claim, but would be allowable if rewritten in dependent form including all of the limitations of the base claim and any intervening claims. As noted above, claim 28 has been amended to incorporate the

subject matter of parent claim 27. Accordingly, applicants submit that the claim, and its dependent claims, are in condition for allowance.

III. Rejections under 35 U.S.C. §102(e)

Claim 29 was rejected under 35 U.S.C. §102(e) as being anticipated by Villeponteau *et al.*, U.S. Patent No. 5,776,679. This rejection is respectfully traversed for the following reasons.

The Examiner stated that the transitional language "consisting essentially of" was being interpreted as "comprising".

As noted above, claim 29 has been amended to change the transitional language "consisting essentially of" to "consisting of".

B. The Cited Art

As pointed out by the Examiner, Villeponteau *et al.* discloses the following nucleotide sequence, which is used as a PCR primer in the reference (Example 8): G TTT GCT CTA GAA TGA ACG GTG GAA G. This sequence includes SEQ ID NOs: 9-12 and a portion of SEQ ID NO: 8 as disclosed in the present specification, plus additional nucleotides. The reference discloses no sequence consisting of any of the sequences recited in claim 29.

Since the reference does not disclose the elements set out above in claim 29, the claim cannot be anticipated by this reference under 35 U.S.C. §102(b). In view of this, the applicant respectfully requests the Examiner to withdraw the rejection under 35 U.S.C. §102(b).

IV. Rejections under 35 U.S.C. §103(a)

Claims 23 and its dependent claims 25-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Villeponteau *et al.*, above.

The claims in question have been cancelled to expedite prosecution, thus obviating this rejection.

V. Further Rejections under 35 U.S.C. §103(a)

Claim 27 was rejected under 35 U.S.C. §103(a) as being unpatentable over Villeponteau *et al.*, above. The rejection is respectfully traversed in light of the following remarks.

A. The Invention

The embodiment of claim 27 is directed to a polynucleotide comprising a sequence of at least 7 nucleotides that specifically hybridizes to a first nucleotide sequence within an accessible region of the RNA component of a human telomerase (hTR), wherein the accessible region is selected from the group consisting of nucleotides 137-196, nucleotides 290-319, and nucleotides 350-380 of hTR (SEQ ID NO:16). The polynucleotide does not hybridize to a nucleotide sequence within a template region of the hTR. The polynucleotide comprises a nucleotide analog or a non-naturally occurring nucleotide analog linkage selected from the group consisting of phosphorothioates, phosphoramidates, methyl phosphonates, chiral-methyl phosphonates, 2'-O-methyl ribonucleotides, and peptide nucleic acids. Finally, the polynucleotide is effective to inhibit the synthesis of telomeric DNA by telomerase.

As described in the specification at, for example, page 2, lines 19-23, the invention provides, for the first time, a selection of regions of the hTR sequence that are particularly accessible to the binding of complementary (or near-complementary) oligonucleotides, and are thus preferred targets for such oligonucleotides, e.g. for inhibition of telomerase activity.

B. The Cited Art

The disclosure of Villeponteau *et al.* provides "the RNA component of, as well as the gene for the RNA component of, human telomerase in substantially pure form, as well as nucleic acids comprising all or at least a useful portion of the nucleotide sequence of the RNA component of human telomerase" (column 2, lines 20-25). As noted in the background of the reference (column 1, lines 29-20), the RNA component of human telomerase had not previously been reported.

The reference teaches generally that "nucleic acids comprising all or at least a useful portion of the nucleotide sequence" of hTR RNA may include antisense oligonucleotides, probes, or primers. (See e.g. column 2, lines 43-67.) However, the reference does not teach or suggest the selection of the accessible regions as targets for inhibitory oligonucleotides, as disclosed by the present applicants.

Villeponteau *et al.* discloses, for example, an oligonucleotide (SEQ ID NO: 23) having the sequence GTTT GCT CTA GAA TGA ACG GTG GAA G. As noted above, this sequence partially overlaps SEQ ID NO: 8 and includes SEQ ID NOs: 9-12 as disclosed in the

present specification. However, in the reference, the oligonucleotide is used as a PCR primer; there is no suggestion to select this particular sequence for use in inhibition of telomerase activity.

Furthermore, there is no suggestion in the reference that this primer sequence should be modified to include "a nucleotide analog or a non-naturally occurring nucleotide analog linkage selected from the group consisting of phosphorothioates, phosphoramidates, methyl phosphonates, chiral-methyl phosphonates, 2'-O-methyl ribonucleotides, and peptide nucleic acids". The reference teaches generally that "the nucleic acids of the invention include both DNA and RNA molecules, as well as synthetic, non-naturally occurring analogues of the same", depending on "the purpose for which the material will be used and the environment(s) in which the material will be placed" (column 15, lines 56-65). For example, such modification can enhance stability in nuclease-containing environments (column 15, line 66 to column 17, line 34). However, there is no particular teaching in the reference to modify the above-referenced primer sequence in this manner.

In view of the foregoing, the applicant respectfully requests the Examiner to withdraw the rejections under 35 U.S.C. §103(a).

VI. Conclusion

In view of the foregoing, the applicant submits that the claims now pending are now in condition for allowance. A Notice of Allowance is, therefore, respectfully requested. If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is encouraged to call the undersigned at (650) 838-4403.

Respectfully submitted,

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